I Claim:

1.   A method of allocating between multiple communication sources a

communication channel in a communication network, the method comprising the

5   steps of:

dividing the communication channel into a plurality of frames;

dividing each of the frames into a plurality of slots;

dividing a first one of the plurality of slots into a plurality of first mini-slots

for use by the multiple communication sources to request the establishment of a

10   new voice, data, or video transmission connection over the communication

channel; and

dividing a second one of the plurality of slots into a plurality of second

mini-slots also for use by the multiple communication sources to request the

establishment of a new voice, data, or video transmission connection over the

15   communication channel and for use by the multiple communication sources to

augment an existing video connection over the communication channel.

2.   The method according to claim 1, further comprising the steps of:

permitting a communication source of the multiple communication sources

20   to use a mini-slot to request a static reservation of communication resources in the

communication channel for a new video transmission connection over the

communication channel while refusing to permit a communication source of the

multiple communication sources to use a mini-slot to request a static reservation of

communication resources in the communication channel for a new voice or data

25   transmission connection over the communication channel; and

permitting a communication source of the multiple communication sources to use a mini-slot to request a dynamic reservation of communication resources in the communication channel for a new voice or data transmission connection over the communication channel.

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3.   The method according to claim 1, wherein the communication network comprises a wireless communication link.

4.   The method according to claim 1, wherein the communication network
10   comprises a local area network link.

5.   The method according to claim 1, wherein the communication network comprises a wide area network link.

15   6.   The method according to claim 1, further comprising the steps of:

determining which of the multiple communication sources have a preexisting video transmission connection over the communication channel; and

assigning to each of the multiple communication sources that have a preexisting video transmission connection over the communication channel one of
20   the second mini-slots.

7.   The method according to claim 1, further comprising the step of determining the number of second mini-slots as a function of the number of the

multiple communication sources that have a preexisting video transmission connection over the communication channel.

8.   The method according to claim 1, further comprising the step of preventing the plurality of first mini-slots from being used by the multiple communication sources to augment an existing video connection over the communication channel.

9.   The method according to claim 1, further comprising the steps of:

receiving a first request from one of the multiple communication sources to establish a new real-time voice transmission connection over the communication channel, wherein the first request identifies bandwidth requirements;

receiving a second request from one of the multiple communication sources, before or after receiving the first request, to establish a new non-real-time data transmission connection or voice transmission connection over the communication channel, wherein the second request identifies bandwidth requirements; and

in response to the steps of receiving, allocating the resources of the communication channel so that meeting the bandwidth requirements identified in the first request is given a higher priority than meeting the bandwidth requirements identified in the second request.

10.   The method according to claim 1, further comprising the steps of:

receiving a first request from a first one of the multiple communication sources to establish a new real-time voice transmission connection over the

communication channel, wherein the first request identifies bandwidth requirements;

receiving a second request from a second one of the multiple communication sources, before or after receiving the first request, to establish a

5 new non-real-time data transmission connection or voice transmission connection over the communication channel, wherein the second request identifies bandwidth requirements; and

in response to the receipt of the first request, allocating resources of the communication channel to the first one of the multiple communication sources in

10 accordance with the bandwidth requirements identified in the first request; and

in response to the receipt of the second request, allocating resources of the communication channel to the second one of the multiple communication sources in accordance with the bandwidth requirements identified in the second request if sufficient resources remain in the communication channel to meet the bandwidth

15 requirements identified in the second request, and otherwise allocating an amount of resources of the communication channel that is less than sufficient to meet the bandwidth requirements identified in the second request.

11. A computer-readable medium for use in allocating between multiple

20 communication sources a communication channel in a communication network, the computer-readable medium having instructions for performing the steps of:

dividing the communication channel into a plurality of frames;

dividing each of the frames into a plurality of slots;

dividing a first one of the plurality of slots into a plurality of first mini-slots for use by the multiple communication sources to request the establishment of a new voice, data, or video transmission connection over the communication channel; and

5   dividing a second one of the plurality of slots into a plurality of second mini-slots for use by the multiple communication sources to request the establishment of a new voice, data, or video transmission connection over the communication channel and for use by the multiple communication sources to augment an existing video connection over the communication channel.

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12.   The computer-readable medium according to claim 11, further comprising instructions for performing the step of determining the number of second mini-slots as a function of the number of the multiple communication sources that have a preexisting video transmission connection over the communication channel.

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13.   The computer-readable medium according to claim 12, further comprising instructions for performing the step of assigning to each of the multiple communication sources that have a preexisting video transmission connection over the communication channel one of the second mini-slots.

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14.   A method of allocating the resources of a communication channel in a communication network between multiple communication sources, the method comprising the steps of:

dividing the communication channel into a plurality of frames;

dividing each of the frames into a plurality of slots;

dividing a first one of the plurality of slots into a plurality of first mini-slots

for use by the multiple communication sources to request the establishment of a

new voice, data, or video transmission connection over the communication

5   channel;

determining whether a video communication source of the multiple

communication sources is currently assigned communication resources in the

communication channel for an existing video connection;

if it is determined that a video communication source is currently assigned

10   communication resources in the communication channel for an existing video

connection, dividing a second one of the plurality of slots into a plurality of

second mini-slots for use by the multiple communication sources to request the

establishment of a new voice, data, or video transmission connection over the

communication channel and for use by the video communication source to

15   augment the existing video connection over the communication channel.

15.   The method according to claim 14, wherein the plurality of first mini-slots

is also for use by the multiple communication sources to augment an existing

voice or data transmission connection over the communication channel.

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16.   A method of allocating available bandwidth of a communication channel

between multiple communication sources, the method comprising:

allocating the available bandwidth into a plurality of time slices;

partitioning each of the time slices into a plurality of timeslots;

subdividing a first one of the plurality of timeslots into a plurality of first sub-timeslots that are usable by the multiple communication sources to request the establishment of a new connection over the channel; and

subdividing a second one of the plurality of timeslots into a plurality of

5   second sub-timeslots for use by the multiple communication sources to request the establishment of a second new connection over the channel and for use by the multiple communication sources to augment an existing video connection over the communication channel.

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